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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/967,047	09/28/2001	Carl Christian Hansen	42390P11378	4821

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EXAMINER
LEVITAN, DMITRY

ART UNIT	PAPER NUMBER
2662	8

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/967,047	HANSEN, CARL CHRISTIAN	
	Examiner	Art Unit	
	Dmitry Levitan	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Applicant's amendment, filed 01/16/04, has been entered. Claims 1-28 remain pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claims 17 and 21 recite the limitations "the first bandwidth" in line 1 and "the second bandwidth" in line 2. There is insufficient antecedent basis for these limitations in the claims.

3. Claim 19 recites the limitations "the first bandwidth" in line 8 and "the second bandwidth" in line 9. There is insufficient antecedent basis for these limitations in the claim.

4. Claim 23 recites the limitations "the first bandwidth" in line 4 and "the second bandwidth" in line 5. There is insufficient antecedent basis for these limitations in the claim.

5. Claim 24 recites the limitation "the first bandwidth" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4-7, 9-12, 14-18, 20-22, 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Rustad (US 6,009,106).

Regarding claims 1, 2, 5-7, 10-12, 15, 16, 18, 20, 22, 24, Rustad teaches a method, an article, a signal, an apparatus and a framer comprising:

Transmitting and receiving a DSL stream (Fig. 13 and 18:65-67, 19:1-7, 19:56-60) with a first proportion of voice signal to data signals (switched channels 12, 14, 16 and digital data path 20 on Fig. 1, 6:30-67, 7:1-12) when a telephone (19:5-7) coupled to receive the communication stream is in a first state (off-hook, carry switched data communication 7:13-21), wherein the voice signal comprises a voice channel (switched channel 16 on Fig. 1) that includes both audio signals and line signals corresponding to the voice channel (voice and robbed-bit signaling on Fig. 4 and 5, 8:5-45); and

Transmitting a second communication stream with a second proportion of voice signals (switched channels 12, 14 and digital data path 20 on Fig. 2, 7:13-41) to data signals when the telephone is in a second state (switched data communication is terminated 7:13-21), wherein the line signals corresponding to the voice channel (robbed-bits on Fig. 4 and 5, 8:41-63) and no audio signals from the telephone (unswitched data signals in channel C3 on Fig. 4 and 5, 8:59-67, 9:1-7) are transmitted and further wherein bandwidth of the voice channel (the most significant seven bits 8:53-58) used for the audio signals when the telephone is in the first state is used for data signals when the telephone is in the second state (on-hook state 8:62-65).

In addition, regarding claims 16, 20 and 24, Rustad teaches

a control circuit (controller 120, monitor 134 and detector 136 on Fig. 6 and 11:7-26) coupled to a telephone (switched data equipment 102 on Fig. 6 and 9:45-51, 19:1-7) and a source

of data signals (unswitched data equipment 106 on Fig. 6 and 9:52-64) to determine the status of the telephone (11:7-26) and generate one or more control signals (11:7-26) and

a framer (carrier interface 126 on Fig. 6 and 10:16-20) coupled to the control circuit and the telephone (switched data equipment 102 on Fig. 6 and 9:45-51, 19:1-7) to allot a channel to carry control , data and audio signals in both states (9:65-67, 10:1-25).

Regarding claims 4, 9 and 14, Rustad teaches the voice channel in the first proportion comprises an 8-bit signal transmitted at 8 kHz (Fig. 4 and 5, 1:32-55, 8:14-18) and the line signals in the second proportion comprises a 1-bit signal transmitted at 8 kHz (robbed-bit signaling bits A, B, C and D on Fig. 4 and 5).

Regarding claims 17 and 21, Rustad teaches the first bandwidth comprises 8 kbit/sec (robbed-bit signaling bits A, B, C and D on Fig. 4 and 5) and the second bandwidth comprises 64 kbit/sec (channel bandwidth of 64 kbps 7:59-63).

Regarding claims 25-27, Rustad teaches the first bandwidth, comprising 64 kbit/sec (off-hook bandwidth, voice and signaling of C2 on Fig. 4 and 5, 8:25-58) is greater than the second bandwidth, comprising 8 kbit/sec (robbed-bit signaling bits A, B, C and D of C3 on Fig. 4 and 5).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rustad.

Regarding claims 3, 8 and 13, Rustad teaches all the limitations of the parent claims 2, 7 and 12, including use of HDSL, SDSL and VDSL.

Rustad does not teach using ADSL in the system. Official notice is taken that ADSL is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using ADSL to the system of Rustad, to utilize widely known and available technology.

5. Claims 19, 23 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rustad in view of Darveau (US 123456789).

Regarding claims, 19, 23 and 28, Rustad substantially teaches all the limitations of claims 19, 23 and 28 including framer, receiving signals from a telephone, passing voice and signaling in off-hook state and signaling in on-hook state to DSL link, including other modifications and variations of the disclosed system (19:42-60).

Rustad does not teach using two multiplexers.

Darveau teaches using two multiplexers (MUX 68 and MUX 54 on Fig. 2A and B, 3:55-67, 4:1-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add using two multiplexers to the system of Rustad, as a hardware oriented implementation of the system.

Response to Arguments

6. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rustad	US006009106A	Dynamic bandwidth allocation within a communications channel.
Darveau	US006466586B1	DSL framing structure supporting imbedded rate adaptive traffic.
Otani	US005367522A	Multimedia communicating apparatus.
Smith	US005901205A	Adaptive voice and data management system for DSL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is 703-305-4384. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

Dmitry Levitan
Patent examiner
02/27/04.

HASSAN KIZOU
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